

**SEARCH REQUEST FORM****Scientific and Technical Information Center**

Requester's Full Name: Debrah Lambkin Examiner #: 7130X Date: 2/16/03  
 Art Unit: 1626 Phone Number 30 84520 Serial Number: 09/886,044  
 Mail Box and Bldg/Room Location: CMS 203 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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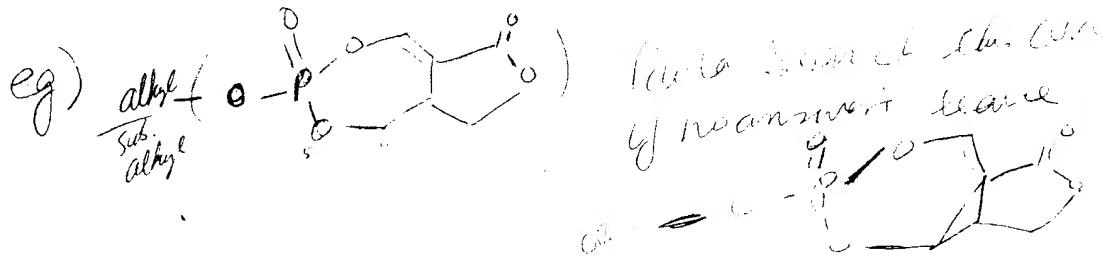
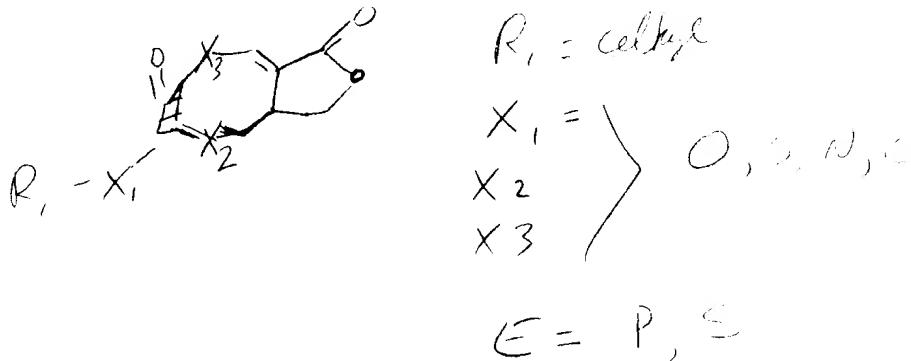
Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Cyclohexostan

Inventors (please provide full names): Laszlo Vertergy et al

Earliest Priority Filing Date:

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

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Searcher: Sheppard  
 Searcher Phone #: 308-4499  
 Searcher Location: \_\_\_\_\_  
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 Date Completed: 2/16/03  
 Searcher Prep & Review Time: \_\_\_\_\_  
 Clerical Prep Time: \_\_\_\_\_  
 Online Time: \_\_\_\_\_

Type of Search	Vendors and cost where applicable
NA Sequence (#)	STN
AA Sequence (#)	Dialog
Structure (#)	Questel/Orbit
Bibliographic	Dr Link
Litigation	Lexis/Nexis
Fulltext	Sequence Systems
Patent Family	WWW/Internet
Other	Other (specify)

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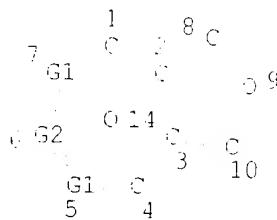
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FILE COVERS 1907 - 6 Feb 2003 VOL 138 ISS 6  
FILE LAST UPDATED: 5 Feb 2003 (20030205/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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VAR G2=P/S

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

FIG(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L5                    32 SEA FILE=REGISTRY SSS FUL L4  
L6                    26 SEA FILE=HCAPLUS ABB=ON PLU=ON L5

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L6 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
ACCESSION NUMBER: 2002:410371 HCAPLUS  
DOCUMENT NUMBER: 137:168939

TITLE: Cyclipostins, novel hormone-sensitive lipase inhibitors from *Streptomyces* sp. DSM 13381: II. Isolation, structure elucidation and biological properties

AUTHOR(S): Vertesv, Laszlo; Berk, Reind; Brønstrup, Mark; Ehrlich, Klaus; Kurz, Michael; Müller, Ulrich; Schummer, Dietmar; Seibert, Berhard

CORPORATE SOURCE: LS Natural Products Research, Germany

SOURCE: Journal of Antibiotics (2001), 55(4), 480-484

CODEN: JANTAJ; ISSN: 0021-8820

PUBLISHER: Japan Antibiotic Research Association

DOCUMENT TYPE: Journal

LANGUAGE: English

CI



- I R=R<sup>3</sup>=Me, R<sup>1</sup>=CH, R<sup>2</sup>=H  
 II P=P<sup>2</sup>=Me, R<sup>1</sup>=R<sup>2</sup>=H  
 III R=R<sup>1</sup>=H, R<sup>2</sup>=R<sup>3</sup>=Me  
 IV R=Me, R<sup>1</sup>=R<sup>2</sup>=H, R<sup>3</sup>=Et

- AB Hormone-sensitive lipase (HSL) is a key enzyme of lipid metab. and its control is therefore a target in the treatment of diabetes mellitus. Cultures of the *Streptomyces* species DSM 13381 have been shown to potently inhibit HSL. Ten inhibitors of HSL, termed cyclipostins, have been isolated from the mycelium of this microorganism and a further nine related compds. detected. Their structures were characterized by 2-D NMR expts. and by mass spectrometry and were found to comprise neutral cyclic enol phosphate esters with an addnl. gamma-lactone ring. On account of their ester-bound fatty alc. side chain, the cyclipostins have physicochem. properties similar to those of triglycerides. The outstanding characteristic of the cyclipostins is their strong anti-HSL activity, with IC<sub>50</sub> values in the nanomolar range. The in vitro and in vivo activities of cyclipostins A, P, P2, and S (I.fwdarw.IV, for inhibition are reported.
- IT 372083-50-6P, Cyclipostin A 372091-46-8P, Cyclipostin P  
 372091-94-6P, Cyclipostin P2 372092-03-0P, Cyclipostin S  
 RL: PAC (Pharmacological activity); PFP (Properties); PUR (Purification or recovery); THU (Therapeutic use); BICL (Biological study); PREP (Preparation); USES (uses)  
 (isolation, structure elucidation, and biol. properties of the hormone-sensitive lipase inhibitors cyclipostins from *Streptomyces* DSM 13381)
- IT 372090-27-2P, Cyclipostin F 372090-93-2P, Cyclipostin N  
 372091-96-8P, Cyclipostin R 372091-98-0P, Cyclipostin R2  
 372092-04-1P, Cyclipostin T 372092-05-2P, Cyclipostin T2  
 FL: PFP (Properties; PUR (Purification or recovery); PREP (Preparation)  
 (isolation, structure elucidation, and biol. properties of the hormone-sensitive lipase inhibitors cyclipostins from *Streptomyces* DSM 13381)
- IT 372088-34-1P, Cyclipostin A2 372091-95-7P, Cyclipostin Q  
 372092-36-9P, Cyclipostin B 372092-41-6P, Cyclipostin C

372092-43-8P, 372092-44-9P,  
372092-46-1P, 372092-51-8P,

447408-07-3P.

*(Classification of the species based on their morphological features)*

(Purification of recombinant protein expressed in yeast) from [NCBI](http://www.ncbi.nlm.nih.gov)

(cf. Streptomyces DSD 1333)

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS REPORT. ALL CITATIONS AVAILABLE IN THE REFORMAT.

## L6 - ANSWER 2 OF THE HOMELY - THE MIND OF A MAN

ACCESSION NUMBER: 1994.100.1001-1001.1001

**TITLE:** *Mythopoeia, Plot, and the Art of Fiction*, by  
Peter Bechtel (See Chapter 1)

INVENTOR(S): Verteby, Larslo; Enrich, Klaus; Kurn, Michael; Wink, Joachim

PATENT ASSIGNEE(S):

SOURCE: U.S. Eq

SOURCE: *The New York Times*, April 1, 1945, p. 1, col. 1.  
GEN. NO. 807, 1945.

DOCUMENT TYPE: Letter

DOCUMENT TYPE: DATA  
LANGUAGE: ENGLISH

LITERATUR

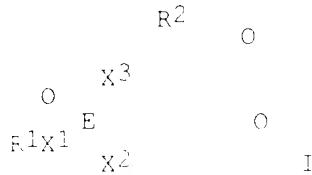
**FAMILY ACC. N.B. CONC.: .  
PATENT ALUMINUMATION.**

## PATENT INFORMATION:

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OTHER SOURCE (1): MAFPAT 136:237111

GI



AB The inversion provides compds. I [R1 = (un)branched (un)satd. (un)substituted carbo- or heterocyclic C2-30 chain, (un)substituted (aryl(CH<sub>2</sub>)<sub>n</sub>)<sub>m</sub> (*m*, *n* = 0-3); R2 = (un)substituted C1-6 alkyl, (un)substituted C2-6 alkenyl, (un)substituted C2-6 alkynyl; E = P, S; X1-X3 = O, NH, N, S, etc.], obtained by culturing Streptomyces species HAG 094107 (AFM 143-1), and their physiol. labile salts and chem. epiv.

The invention furthermore provides a process for the preparation of the cyclipeptins, the microorganism HAG 004104 (DSM 13381), the use of the cyclipeptins and their physiol. tolerable salts and enantiomers, as pharmaceuticals, in particular as inhibitors of lipases and amylases for treating diabetes, and pharmaceutical preps. which contain cyclipeptin or a physiol. tolerable salt or equiv. thereof.

IT 372083-50-6P, Cyclipeptin A 372088-34-1P, Cyclipeptin A2

372090-27-2P, Cyclipeptin F 372090-93-2P, Cyclipeptin N

372091-46-8P, Cyclipeptin P 372091-94-6P, Cyclipeptin PZ

372091-95-7P, Cyclipeptin Q 372091-96-8P, Cyclipeptin R

372091-98-0P, Cyclipeptin R1 372092-03-0P, Cyclipeptin S

372092-04-1P, Cyclipeptin T 372092-05-2P, Cyclipeptin U

372092-36-9P, Cyclipeptin V 372092-41-6P, Cyclipeptin W

R.: BPN (Biosynthetic preparation); NPA (Natural product occurrence); PAU (Pharmacological activity); PUR (Purification); PREV (Previews); PRU (Therapeutic use); BIOL (Biological study); OWC (occurrence); PPSI (Preparation); USES (Uses)

(cyclipeptins, fermentative prodn., and pharmaceutical use)

L6 ANSWER 3 OF 26 SCAPLUS COPYRIGHT 2003 ARI

ACCESSION NUMBER: 2001-316678 SCAPLUS

DOCUMENT NUMBER: 135:356841

TITLE: Method for the production of cyclipeptins obtained by the cultivation of the Streptomyces species HAG 004104 (DSM 13381) and their use as inhibitors of lipases

INVENTOR(S): Vertesy, Laszlo; Ehrlich, Klaus; Kurz, Michael; Wink, Joachim

PATENT ASSIGNEE(S): Aventis Pharma Deutschland G.m.b.H., Germany

SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIKXD2

DOCUMENT TYPE: Patent

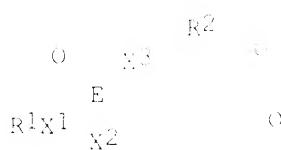
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001033497	A1	20011108	WO 2001-EP1452	20010425
W: AF, AG, AL, AM, AR, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CT, DE, DK, DM, DO, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KL, LK, LS, LR, LS, LT, LU, LV, MA, MD, MG, MK, MU, MY, NX, NC, NO, NL, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TC, TH, TR, TW, CL, MA, UG, UZ, VN, YU, ZA, ZW, AM, AE, BY, EG, KZ, UD, EU, TM, TM				
RW: GH, GM, KE, LG, MM, ME, SD, SI, TZ, WG, SW, AT, BE, CH, CY, DE, DK, ES, FI, FP, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TG, TG				
DE 10021731	A1	20011115	DE 1000-10021731	20000504
EP 1280812	A1	200030205	EP 2001-936275	20010425
E: AT, BE, CH, DE, DK, ES, FP, GR, GP, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2002058645	A1	20020516	US 2001-886044	20010622
PRIORITY APPLN. INFO.:			DE 2000-10021731 A	20000504
			WO 2001-EP1452	20010425
			US 2001-847277 A2	20010503

OTHER SOURCE(S): MARPAT 135:356841  
GI






REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS PEGOND. ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L6 ANSWER 4 OF 26 HCAPLIS COPYRIGHT 2013 ACS  
ACCESSION NUMBER: 1199133711 HCAPLIS  
DOCUMENT NUMBER: 1301337674  
TITLE: Pyrolysis of tricyclic cyclobutane-fused sulfolanes as a route to cis-1,2-divinyl compounds and their Cope-derived products  
AUTHOR(S): Aitken, R. Alan; Cadogan, J. I. G.; Gosney, Ian; Humphries-Burhan, Caroline M.; McLaughlin, Lee M.

CORPORATE SOURCE: Wyse, Stuart J.  
 SOURCE: Department of Chemistry, The University of Edinburgh,  
 Edinburgh, EH9 3JL, UK  
 Journal of the Chemical Society, Perkin Transactions  
 I: Organic and Bio-Organic Chemistry (1996), 22, 607-614  
 CODEN: JCPRB4; ISSN: 0300-904X  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): JANNAI 120, 337, 74

AB Finerolization of the double bond of 3-thiabicyclo[3.2.0]hept-6-ene,  
 readily formed by hydrolysis of the [1,2]-cycloadduct of 3-sulfolane and  
 maleic anhydride, readily isomerized to 3-thiabicyclo[3.2.0]hept-6-ene, 5,5-dioxide  
 and 3-thiabicyclo[3.2.0]hept-6-ene, 5,5-dioxide with the loss of SO<sub>2</sub>.  
 Reaction of 3-thiabicyclo[3.2.0]hept-6-ene, 5,5-dioxide with LiAlD<sub>4</sub>  
 results in stereospecific extrusion of SO<sub>2</sub> to give Z-hexa-1,3,5-triene which  
 undergoes electrocyclization to give 1,3-cyclohexadiene while reaction of  
 3-thiabicyclo[3.2.0]hept-6-ene, 5,5-dioxide with LiAlH<sub>4</sub> results in  
 non-stereospecific extrusion to give Z- and E-hexa-1,3,5-triene. Both  
 flash vacuum pyrolytic tricyclic sulfones lose SO<sub>2</sub> to give 5-methyl-1,3-diene  
 products by Cope rearrangement of the initially formed cis-1,2-divinyl  
 intermediates. The 1,3-dipolar cycloaddn. of nitrile oxides and nitriles  
 to the double bond of 3-thiabicyclo[3.2.0]hept-6-ene, 5,5-dioxide gives  
 tricyclic sulfones with the tricyclic[5.3.0.0]skeleton and a wider  
 variety of these can be prepd. by conventional reactions of  
 hexahydrothiopheno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, 5,5-dioxide.  
 Upon flash vacuum pyrolysis these lose SO<sub>2</sub> to give stable cis-1,2-divinyl  
 compds. The Liebsch-Elder adducts were prepd. from 3-thiabicyclo[3.2.0]hept-  
 6-ene, 5,5-dioxide and these behave differently upon flash vacuum  
 pyrolysis, losing SO<sub>2</sub> and a tailene to give tetrasubstituted benzenes, in  
 the latter case by way of an unexpected tetracyclic intermediate.

IT 224576-83-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(prep. of cis-divinyl compds. and their Cope-derived products via  
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

IT 33974-24-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(prep. of cis-divinyl compds. and their Cope-derived products via  
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

IT 224576-81-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(prep. of cis-divinyl compds. and their Cope-derived products via  
 pyrolysis of tricyclic cyclobutane-fused sulfolanes)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 26 HCPIUS CITYEIGHT 2003 ACS

ACCESSION NUMBER: 1996:042171 HCPIUS

DOCUMENT NUMBER: 125:263671

TITLE: Arisugacins A and B, novel and selective  
 acetylcholinesterase inhibitors from Penicillium sp.  
 EO-4259. I. Screening, taxonomy, fermentation,  
 isolation and biological activity

Arisugacins A and B, novel and selective  
 acetylcholinesterase inhibitors from Penicillium sp.  
 Funo, Fumiyoji; Otoguro, Kazuhiko; Shiochi, Kazuro;  
 Iwai, Yururu; Omura, Satoshi

AUTHOR(S): Research Center Biological Function, The Kitasato  
 Institute, Tokyo, 108, Japan

CORPORATE SOURCE: Journal of Antibiotics (1996), 49(8), 741-747

SOURCE: CODEN: JANTAJ; ISSN: 0021-8810

PUBLISHER: Japan. Antif. Ind. Res. Inst. and Co., Ltd.

DOCUMENT TYPE: Patent

LANGUAGE: English

AB An in vitro screening method for selective and potent inhibitors of AChE and butyrylcholinesterase (BuChE) was established. Inhibitory activity of AChE and butyrylcholinesterase (BuChE) was measured and the culture extracts of microorganisms that showed selective inhibition against AChE were characterized. By using this method, a strain producing the novel and selective inhibitors of AChE, antibiotic NK901, was picked out among over seven thousand microorganisms tested. Antibiotic NK901 is obtained as white powder from the culture of the strain. It is a new compound isolated from territories P and I and its specific name is antibiotic NK901. It showed potent inhibition against AChE. Antibiotic NK901 and its analogs are members of the new compound group. They showed potent inhibitory activities against AChE with IC<sub>50</sub> values in range of 1.0 approx. 20.8 nM. Furthermore, they showed greater than 2000-fold more potent inhibition against AChE than BuChE.

IT 144773-26-2P, Cyclophostin

RL: BAC (Biological activity or microtiter, except adverse); BPN (Biosynthetic preparation); PSU (Biological study, unclassified); BLO (Biological assay); PRE (Preparation); (screening method for potency of cholinesterase inhibitors)

L6 ANSWER 6 OF 16 HAVING A HIGH ACTIVITY AGAINST AChE

ACCESSION NUMBER: 144773-26-2P

DOCUMENT NUMBER: 144773-26-2P

TITLE: Antibiotic NK901, AChE, BuChE inhibitor, with Streptomyces, and insecticide and acaricide containing NK901

INVENTOR(S): Inawa, Takeo; Hayao, Tatsumi; Kobayashi, Masuko; Masui, Akie; Kurokawa, Takashi; Nakagawa, Taizo

PATENT ASSIGNEE(S): Nippon Kayaku Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKEMAF

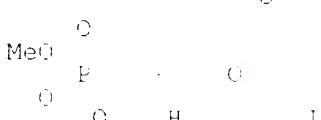
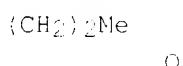
DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06036859	A2	19940301	JP 1991-207234	19910725
PRIORITY APPLN. INFO.: GI			JP 1991-207234	19910725



AB Antibiotic NK901 (I), useful as an insecticide and acaricide, is manufd. by culturing I-producing Streptomyces sp. S. lavandulae NK901093 (FERM P-11713) was shake-cultured in a medium contg. glycerin, soybean powder, and NaCl at 27.degree. for 2 days, aerobically cultured in the same medium for 1 day, aerobically cultured in a similar medium at 27.degree. for 6 h, filtered, and the filtrate (90 L) was processed to manuf. 36 mg I. I inhibited acetylcholinesterase from houseflies with 50% inhibitory concn. of 1.1 times, I<sup>-</sup>M. Formulation examples and

physicochem. properties of I and properties of the N<sub>2</sub>-labeled product are given.

IT 156312-04-8, NK 901093A

FL: BIOL (Biological study)

(acetylcholinesterase-inhibiting insecticide and acaricide, from *Streptomyces lavendulae*)

L6 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:2472 HCAPLUS  
 DOCUMENT NUMBER: 118:2472  
 TITLE: Cyclophostin, acetylcholinesterase inhibitor, from *Streptomyces lavendulae*  
 INVENTOR(S): Kurokawa, Takashi; Hayaka, Tatsumi; Izawa, Takeo;  
 Kobayashi, Masuko; Kiriwhara, Shigeki; Nakagawa, Taizo;  
 Corpofate SOURCE: Appl. Microbiol. Res. Cent., Nippon Kayaku Co., Ltd.,  
 SOURCE: Ageo, 362, Japan  
 Journal of Antibiotics (1993), 46(8), 1811-18  
 DOCUMENT TYPE: CCDEU: JANTIC; ISBN: 0874-3256  
 LANGUAGE: English

AB In the course of screening program for natural insecticides of microbial origin, the authors isolated a new product, cyclophostin (I), from *Streptomyces lavendulae* strain NK901093 as a strong inhibitor of acetylcholinesterase. I showed one of the strongest inhibitory activity values for the acetylcholinesterase of houseflies: I50 7.6 times. 10-10M. The authors report here the isolation and structure of compd. I including its abs. stereochem. I is probably the same as TAN-1139, a compd. disclosed in the Japanese patent literature but whose structure has not been previously described.

IT 144773-26-2, Cyclophostin

FL: BIOL (Biological study)

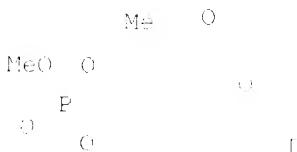
(acetylcholin esterase inhibitor, from *Streptomyces lavendulae*, isolation and structure of)

L6 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:2472 HCAPLUS  
 DOCUMENT NUMBER: 118:2472  
 TITLE: Fermentative preparation of antibiotic NK901093 as insecticide and miticide.  
 INVENTOR(S): Kurokawa, Takashi; Hayaka, Tatsumi; Izawa, Takeo;  
 PATENT ASSIGNEE(S): Kobayashi, Masuko; Kiriwhara, Shigeki; Nakagawa, Taizo  
 SOURCE: Nippon Kayaku Co., Ltd., Japan  
 Jpn. Kokai Tokkyo Koho, 10 pp.  
 CCDEU: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04145089	A2	19920519	JP 1990-066451	19901005
PRIOORITY APPLN. INFO.:			JP 1990-066451	19901005

GI



AB NK981093 (I) is prep'd. with streptomycin as an antibiotic. I showed ICBG at 2.5 times, 10-MM and 100-MM concentrations, 10 times, 100-6M for malachite and 100-100-6M for protein at 2500 rpm.

IT 144773-26-2P. NK 800018

FI: BMF (Bioindustrial manufacture); BIOL (Biological study); PREP (Preparation)  
(manuf. of, with Streptomyces, as insecticide and nematicide)

1.6 ANSWER 9 OF 26 ECAPIJS COPYRIGHT 2003 AGS

ACCESSION NUMBER: 1981-0747-0001  
DOCUMENT NUMBER: 1

TABLE I

AUTHORS ·

CORPORATE SOURCE:  
SOURCE:

DOCUMENT TYPE:  
LANGUAGE:  
OTHER SOURCE(S)  
GT

(1971), (3), 203-17  
CODEN: JCERB4; ISSN: 0260-921X  
Journal  
English  
CASREACT 115:274722

EDDIE: JCEEEBA4; LS IN: 00000-433W

Journal

Medieval  
English

CASREACT 115·273722

1

AB The effectiveness and limitations of 3-oxabicyclic[3.2.0]hept-6-ene-2,4-dione (I) (cyclobut-3-ene-1,2-dicarboxylic anhydride) as an acetylene equiv. in both 1,3-dipolar and Diels-Alder cycloaddns. is reported; it reacted readily with a variety of reagents, including N-benzylideneaniline N-Oxide, nitrile oxides, diazomethane, cyclopentadiene, tetracyclone, anthracene, 1,2,5-triphenylphosphole 1-oxide and 1,3-diphenylisobenzofuran. In all cases, the sterically favored anti-isomers are formed exclusively. The configuration of the Diels-Alder adducts are assigned as endo with the exception of that from tetracyclone (and possibly 1,3-diphenylisobenzofuran) for which an exo-structure is assumed on the basis of steric arguments. Adducts were not obtained with several other reagents; possible reasons for this lack of reactivity are discussed. When subjected to flash vacuum pyrolysis, the adducts underwent thermal fragmentation, either by a retro-cleavage, or by loss of maleic anhydride to form products that are derived formally from reaction of acetylene in the cycloaddn. step. A concerted pathway is proposed for

the pyrolytic conversion into the 1-formylcyclopropane is more efficient than a stepwise radical mechanism.

IF 137411-69-9P

FL: SPP (Synthetic preparation); PREP (Preparation)  
(prep., configuration and flash vacuum pyrolysis +)

26 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:69022 HCAPLUS

DOCUMENT NUMBER: 104:69022

TITLE:

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

OTHER SOURCE(S):

GI



AB Previous limitations of highly reductive RHC(=O)Ph<sub>2</sub> as a tandem annulating reagent in Diels-Alder reactions are overcome using its masked form I, and subsequent extrusion of SO<sub>2</sub> by flash vacuum pyrolysis. E.g., Diels-Alder reaction of I with HCO<sub>2</sub>Ph and CO<sub>2</sub>Me in PhCl gave product II which was converted to Me 1,4,6,7-tetrahydronaphth-2-olate on flash vacuum pyrolysis at 500.degree..

IT 33974-24-2

FL: RCT (Reactant); FACT (Reactant or reagent)  
(esterification and redn. of)

26 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:69022 HCAPLUS

DOCUMENT NUMBER: 104:69022

TITLE:

AUTHOR(S):

CORPORATE SOURCE:

SOURCE:

DOCUMENT TYPE:

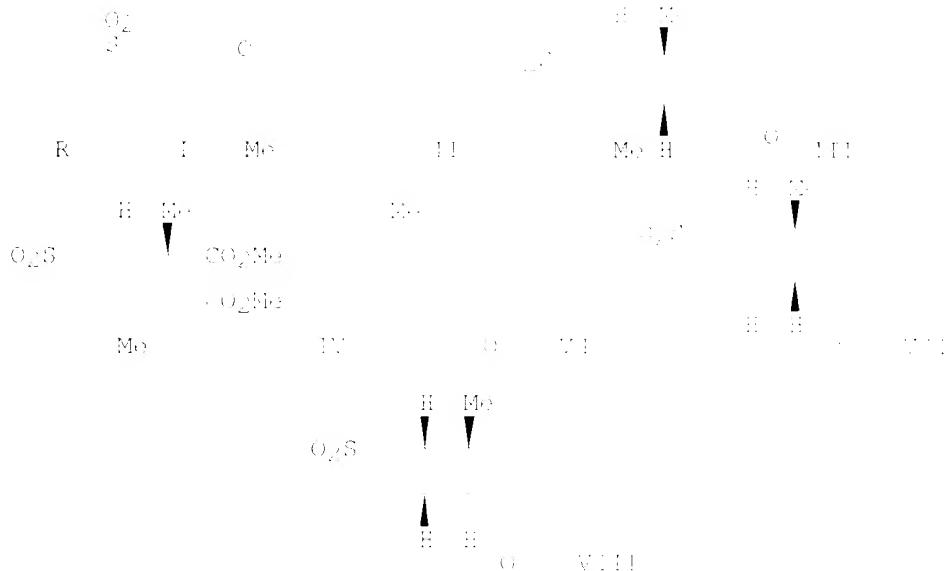
LANGUAGE:

OTHER SOURCE(S):

GI

Synthesis of 1,5-dienes via [2 + 2] photocycloadditions between 2,5-dihydrothiophene 1,1-dioxides (sulfolenes) and .alpha.,.beta.-unsaturated cyclic ketones and anhydrides. Synthesis of 10-hydroxygeraniol

Williams, John R.; Lin, Charles; Chodosh, Daniel F.  
Dep. Chem., Temple Univ., Philadelphia, PA, USA  
Journal of Organic Chemistry (1986), 50(26), 5815-22  
DOI: 10.1002/joc.1090502611; ISSN: 0022-1522



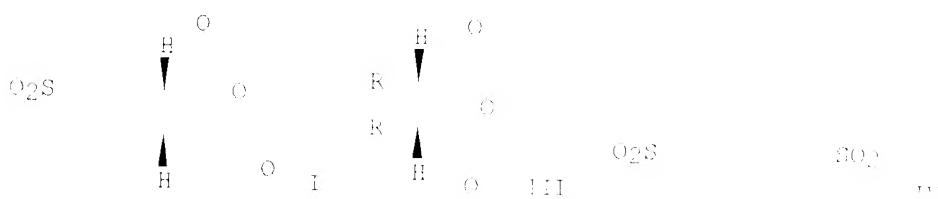
AB: Photocycloaddn. reaction of geraniol (I) ( $\text{R} = \text{H}$ ) with cyclohexene, gave a mixture of photoadduct III, esterification of which gave the ester IV. Flash vacuum pyrolysis of IV or its trans isomer, obtained by isomerization of IV with NaOMe, gave a mixt. of the 4 geometric isomers of  $\text{MeO}_2\text{CMe}:\text{CHCH}(\text{CH}_2)\text{CH}(\text{H})\text{Me}$  (V) via Cope rearrangement of the 1,2-divinyl intermediate. Redn. of (E,E)-V gave (E,E)- $\text{HO}(\text{CH}_2\text{CMe}:\text{CHCH}_2)_2\text{OH}$  (10-hydroxygeraniol). Several other examples of this method are given, one of which involved photocycloaddn. of I ( $\text{R} = \text{H}$ ) with cyclohexene VI to give photoadducts VII and VIII, the structures of which were confirmed by x-ray crystallog.

IT 82535-14-6P 99685-39-9P

FL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RMN (Reactant or reagent)  
(prepn., esterification, and flash vacuum pyrolysis of)

L6 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1983:612362 HCAPLUS  
 DOCUMENT NUMBER: 99:212362  
 TITLE: Dehydrogenative vacuum pyrolysis: a novel synthetic technique. Conversion of cycloocta-1,5-diene into styrene and related products  
 AUTHOR(S): Parker, Caroline M.; Sidhu, T. I. J.; Gisney, Ian; Hamill, Brendan J.; Newlands, Stephen F.; Whan, David A.  
 CORPORATE SOURCE: Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JJ, UK  
 SOURCE: Journal of the Chemical Society, Chemical Communications (1983), (13), 725-6  
 CODEN: JCCCAT; ISSN: 0022-4736  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 99:212362  
 GI



AB Vacuum pyrolysis of the title compound I in the presence of CdCl<sub>2</sub> at 100.degree. gave phthalic anhydride. Similar treatment of anhydride III (R<sub>2</sub> = (CH<sub>2</sub>)<sub>6</sub>CH<sub>3</sub>, R = CH<sub>2</sub>CH<sub>3</sub>) in 45% yield. Pyrolysis of the disulfone IV and 1,7-heptadiene in the presence of CdCl<sub>2</sub> at 100.degree. gave PhCd:CH<sub>2</sub> in 12 and 62% yield, resp.

IP **33974-24-2**

EL: RCT (Reactant); RACT (Reactant or reagent)  
(dehydrogenative vacuum pyrolysis of phthalic anhydride)

LC ANSWER 14 OF 26 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:71904 HCPLUS

DOCUMENT NUMBER: 98:71904

TITLE: 3-Thiabicyclo[3.2.0]hept-6-eno-3,3-dioxide: a novel synthon for cis-1,2-divinyl intermediates and derived seven-membered ring systems

AUTHOR(S): Aitken, F. Alan; Cadogan, J. I. G.; Gosney, Ian; Hamill, Brendan J.; McLaughlin, Leo M.

CORPORATE SOURCE: Dep. Chem., Univ. Edinburgh, Edinburgh, EH9 3JJ, UK  
SOURCE: Journal of the Chemical Society, Chemical Communications (1982), (20), 1164-5

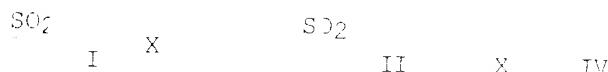
CODEN: JCCCAT; ISSN: 0954-4936

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 98:71904

GI



AB Functionalization of the double bond of the title compd. (I), followed by extrusion of SO<sub>2</sub> gave cis-1,2-divinyl intermediates which underwent Cope rearrangement to give 7-membered rings. E.g., peroxidation of I with HOOC(O)OOH for 48 h at 55.degree. gave II (X = O) (III) in 39% yield; pyrolysis of III at 580.degree. and 10<sup>-3</sup> mm Hg gave IV (X = O) in 55% yield. Similarly, pyrolysis of II (X = NCO<sub>2</sub>Et), prepd. by photolysis of I in Et azidoformate, gave IV (X = NCO<sub>2</sub>Et).

IP **33974-24-2**

EL: RCT (Reactant); RACT (Reactant or reagent)  
(oxidative decarboxylation etc.)

IT **84451-46-7P**

EL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and pyrolysis of)

LC ANSWER 14 OF 26 HCPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:471910 HCPLUS

DOCUMENT NUMBER: 98:71910

TITLE: A simple, stereospecific synthesis of  
1,2,3-trisubstituted 1,3-dienes

AUTHOR(S): Lin, C. J.; Williams, John R.; Chang, L. Y.;  
Huang, Shou-Chen; Chen, H. C.

CORPORATE SOURCE: Dep. Chem., Temple Univ., Philadelphia, PA, USA

SOURCE: Journal of the Chemical Society, Chemical Communications (1981), 752-3

DOCUMENT TYPE: Article

LANGUAGE: English

OTHER SOURCE(N): CODEN: JCCCAT; ISSN: 0022-4936

GI

R  
O2S

R II

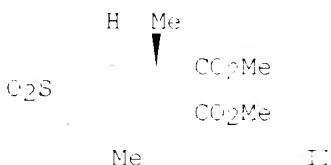
AB The dienes RII: H-C=C-C(=O)R; Me-C=C-C(=O)R; Et-C=C-C(=O)R were synthesized by prepolymerization of the monomer RII [RC = (CO)<sub>2</sub>Me] (III) with acryloyl chloride followed by esterification and elimination of CO<sub>2</sub> and pyrolysis. Pyrolysis at 500.degree. and 10<sup>-3</sup> mm gave 70% of R-II (IV).

IT 82535-14-6

EL: RCT (Reactant); RAFT (Reactant or reagent)  
(hydrolysis oil)

L6 ANSWER TO OF 26 HCAFLUO COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1982:20267 HCAFLUO  
DOCUMENT NUMBER: 96:20267  
TITLE: Photocycloaddition of 2,5-dihydrothiophene S,S-dioxide to alpha,beta-unsaturated cyclic anhydrides. Synthesis of 10-hydroxygeraniol  
AUTHOR(S): Williams, John R.; Lin, Charles  
COPORATE SOURCE: Dep. Chem., Temple Univ., Philadelphia, PA, 19122, USA  
SOURCE: Journal of the Chemical Society, Chemical Communications (1981), (15), 752-3  
CODEN: JCCCAT; ISSN: 0022-4936  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
GI



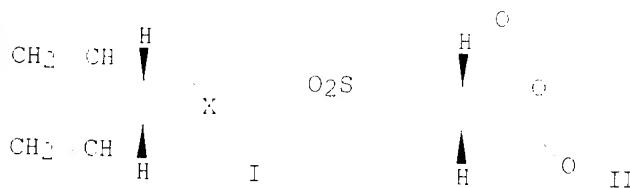
AB The photochem. cycloaddn. of 2,5-dihydro-3-methylthiophene S,S-dioxide (I) with citraconic anhydride followed by CH<sub>2</sub>N<sub>2</sub> addn. gave the diester II which on flash vacuum pyrolysis (500.degree., 3.5 mm) underwent SO<sub>2</sub> elimination and Cope rearrangement to give (E,E-RCH:CH<sub>2</sub>)<sub>2</sub>CH:CH<sub>2</sub> (III; R = CO<sub>2</sub>Me) (IV). Redn. of IV gave the title terpene precursor III (R = CH<sub>2</sub>OH) (V). The overall yield of V from I was 4%.

IT 79926-12-8P

PL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn., esterification, and pyrolysis reactions)

L6 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1981:1442793 HCAPLUS  
 DOCUMENT NUMBER: 94:1442793  
 TITLE: Isothiocyanide synthesis of some 3-  
 thiabicyclo[3.2.0]heptane derivatives  
 Authors: Shukla, Atma; V. Sh.; Andreev, K. M.; Chirkova, I.  
 A.  
 CORPORATE SOURCE:  
 SOURCE: Organ. React. Ser., Part 1(1), (2), 150-6  
 From: Russ. Khim. Zhurn. 1971, No. 8, 1813  
 Journal  
 LANGUAGE: Russian  
 AB Title only translated.  
 IT 33974-24-2P  
 FL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT 33974-22-0P  
 FL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn., decarboxylation, bromination, cyclization, and isomerization)

L6 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1981:156660 HCAPLUS  
 DOCUMENT NUMBER: 94:156660  
 TITLE: Flash vacuum pyrolysis of the 3-  
 thiabicyclo[3.2.0]heptane 3,3-dioxide ring system: a  
 new stereospecific synthesis of cis-1,2-divinyl  
 derivatives  
 Authors: Cadogan, J. I. G.; Gosney, Ian; McLaughlin, Leo M.;  
 Hamill, Brendan J.  
 BP Res. Cent., Sunbury-on-Thames, TW16 7LN, UK  
 Journal of the Chemical Society, Chemical  
 Communications (1980), (24), 1242-3  
 CCDC: JCCCAT; ISSN: 0022-4936  
 Journal  
 LANGUAGE: English  
 GI



AB The cis-1,2-divinyl compds. I (X = O, S, NHRPh) were prep'd. from the  
 thiabicycloheptane-dicarboxylic anhydride II. E.g., sequential  
 esterification, redn., and cyclization of II gave 4-oxa-9-  
 thiatricyclo[5.3.0.0]decane 9,9-dioxide, which on flash vacuum pyrolysis  
 (1-3 mm Hg, 625.degree.) gave 62% I (X = O). The corresponding  
 cis-1,2-divinyl anhydride and lactone derivs. were also prep'd. from I by  
 pyrolysis and sequential redn. (NaBH4, DME) and pyrolysis, resp.

IT 77196-23-7P  
 FL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. and flash pyrolysis of, divinyl compd. by

IT 33974-24-2

RL: RCT (Reactive; ; heat); PREP (Preparation or reaction)  
 (pyrolysis, cond., esterification, etc.); SYN (Synthesis); DT, DT  
 divinyl comp.; syntheses)

L6 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2003 ARI

ACCESSION NUMBER: 1975:188542 HCAPLUS  
 DOCUMENT NUMBER: 86:188542  
 TITLE: Preparative photosynthesis of anhydrides and imides of  
 polyvinyl structures  
 Chikatani, T., et al.; Tashiro, K.; Ando, S.;  
 Saitoh, T.; Yamashita, E. T.  
 CORE RATE SOURCE: RIKK  
 SOURCE: Khimiya i Fiz.-Khimiya Polimerov, 1975, v.11, p.11  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 AB Title only translation.

IT 33974-22-OP 33974-24-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prep. of)

L6 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2003 ARI

ACCESSION NUMBER: 1977:10948 HCAPLUS  
 DOCUMENT NUMBER: 86:10948  
 TITLE: Chemical regulation of plant growth using  
 3-thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride  
 3,3-dioxide  
 Inventor(s): Bloomfield, Gordon J.  
 Patent Assignee(s): Monsanto Co., USA  
 SOURCE: U.S., 5 pp. Division of U.S. 3,873,565.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3979201	A	19760907	US 1974-524583	19741118
US 3873568	A	19750325	US 1972-275129	19720726
PRIORITY APPLN. INFO.:			US 1972-275129	19720726
GI				

O<sub>2</sub>S - . C

O I

AB 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride 3,3-dioxide (I) (33974-24-2) regulates the natural growth or development of dicotyledonous plants. Thus, in small-plot expts., I applied to soybean plants at primary leaf stage (rate equiv. to approx. 6 lb/acre) demonstrated effective retardation of vegetative growth. The synthesis of I is given.

IT 33974-24-2

RL: AGF (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(plant growth regulator)

L6 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1971:49187 HCAPLUS  
 DOCUMENT NUMBER: 83:32371  
 TITLE: 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride  
 5,5-dioxide  
 INVENTOR(S): Bloomfield, Jordan J.  
 PATENT ASSIGNEE(S): Monsanto Co., USA  
 SOURCE: U.S., 1 pp.  
 CODEN: USPAAN  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3874768	A	19760325	US 1972-275129	19720726
US 3874761	A	19760307	US 1974-324573	19741114

EFFECTIVITY APPLN. INFO.: P01974-24-24 1974-07-14

GI For diagram(s), see printed CA Issue.

AB 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride, 5,5-dioxide [33974-24-2] is a plant growth inhibitor. Thus, in greenhouse exp's. 1 lb. I/acre, applied to soybeans at the primary leaf stage, decreased the height of plants by approx. 25%, compared with untreated control plants. I was prep'd. by reaction of maleic anhydride [108-31-6] with 2,4-dihydrothiophene 1,1-dioxide [77-79-2] in BzMe, at 5-6.degree., under uv light.

IT 33974-24-2

RL: R01-Biological study  
 (plant growth inhibitor)

L6 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1973:71898 HCAPLUS  
 DOCUMENT NUMBER: 78:71898  
 TITLE: 3-Sulfonobicyclo[3.2.0]heptane-6,7-dicarboxylic acid  
 anhydrides or imides  
 INVENTOR(S): Shaikhrazieva, V. Sh.; Enikeev, R. S.; Tolstikov, G.  
 A.  
 PATENT ASSIGNEE(S): Institute of Chemistry, Ufa  
 SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Svyazi,  
 Izvarknye Znaki 1972, 49(22), 95.  
 CODEN: URXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Russian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 345151		19720714	SU	19700915

GI For diagram(s), see printed CA Issue.

AB The title compds. (I) are prep'd. by treating 3-sulfiene with II (X = O, NH, or NMe) in the presence of uv-radiation in acetone and a stream of inert gas.

IT 33974-24-2P

FL: SPM (Synthetic preparation); PREP (Preparation)  
 (prep'n. of)

L6 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1972:153465 HCAPLUS  
 DOCUMENT NUMBER: 76:153465

**TITLE:** The cationic addition of maleic anhydride and its derivatives to  $\beta$ -sulfolene  
**AUTHOR(S):** Chaikhnazarova, V. Sh.; Enikolopyan, R. S.; Tolstikov, G. A.  
**CORPORATE SOURCE:**  
**SOURCE:** Inst. Khim., Ufa, USSR  
**DOCUMENT TYPE:** Journal Article  
**LANGUAGE:** Russian  
**GI:** For diagram(s), see printed CA Issue.  
**AB:** Maleic anhydride, maleimide, and dichloromaleic anhydride added to  $\beta$ -sulfolene in Me<sub>2</sub>CO under uv irradn., forming the corresponding sulfone, cf. 6,7-dicarboxy-3-thiabicyclo[3.2.0]heptane-1,1-dioxide. Similarly, photochem. dimerization of dimethylmaleic anhydride in Me<sub>2</sub>CO gave 15-9% cis,trans,cis-1,2,3,4-tetramethylcyclohexane-1,2,3,4-tetracarboxylic dianhydride (II). I and II gave the expected products with LiAlH<sub>4</sub>, aq. NaOH, THF, MeOH, and N<sub>2</sub>H<sub>4</sub>.  
**IT 33974-22-OP 33974-24-2P**  
**EL:** SFI (Synthetic preparation); PREP (Preparation) (prepn. of)

L6 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
**ACCESSION NUMBER:** 1968:3008 HCAPLUS  
**DOCUMENT NUMBER:** 6:3008  
**TITLE:** The cationic addition of maleic anhydride and its derivatives to  $\beta$ -sulfolene  
**AUTHOR(S):** Chaikhnazarova, V. Sh.; Enikolopyan, R. S.; Tolstikov, G. A.  
**CORPORATE SOURCE:** Pashk. Fil., Inst. Khim., Ufa, USSR  
**SOURCE:** Zhurnal Organicheskoi Khimii (1971), 7(8), 1763  
**DOCUMENT TYPE:** Journal Article  
**LANGUAGE:** Russian  
**AB:** Uv irradn. of maleic anhydride, maleimide, or dichloromaleic anhydride with  $\beta$ -sulfolene in Me<sub>2</sub>CO afforded 3-sulfonobicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride (I, the corresponding imide, and the 6,7-dichloro deriv. of I, resp., in 13-55% yield. Treatment of I with N<sub>2</sub>H<sub>4</sub> gave the hydrate, and redn. of I with LiAlH<sub>4</sub> in THF yielded 6,7-bis(hydroxymethyl)-3-sulfonobicyclo[3.2.0]heptane.  
**IT 33974-22-OP 33974-24-2P**  
**EL:** SFI (Synthetic preparation); PREP (Preparation) (prepn. of)

L6 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2003 ACS  
**ACCESSION NUMBER:** 1968:3008 HCAPLUS  
**DOCUMENT NUMBER:** 6:3008  
**TITLE:** Constituents of Hyaenanche globosa. Structure of substance C and correlation between picrotoxinin and tatin  
**AUTHOR(S):** Corbelli, Attilio; Commi, Giancarlo; Rindone, Bruno; Scolastico, Carlo  
**CORPORATE SOURCE:** Univ. Milan, Milan, Italy  
**SOURCE:** Annali di Chimica (Rome, Italy) (1967), 57(6), 758-69  
**DOCUMENT TYPE:** Journal Article  
**LANGUAGE:** Italian  
**GI:** For diagram(s), see printed CA Issue.  
**AB:** The structure I was confirmed for the compd. C<sub>16</sub>H<sub>20</sub>O<sub>7</sub> (CA substance) isolated from the methanolic extns. of Hyaenanche globosa fruits. Thus, catalytic (Ed) redn. of 0.1 g. I in H<sub>2</sub>O gave 0.07 g. II, m. 288-90.degree., [alpha]<sub>D</sub><sup>20D</sup> -17.5.degree., which with POCl<sub>3</sub> in CS<sub>2</sub> 120 hrs. at room temp. gave III, m. 185-90.degree., [alpha]<sub>D</sub><sup>20D</sup> 52.5.degree.. IV (compd. D) (CA 63: 11467c) with POCl<sub>3</sub> in CS<sub>2</sub>, 120 hrs. at room temp.

gave a mixt. of III and IV probably due to partial hydrolysis of IV, which were sepa. by chromat. in 1.5 ml. benzene-CHCl<sub>3</sub>-iso-PrOH (1:1:1). Conversely, IV with 30% in CH<sub>2</sub>NH, 1 hr., at room temp., gave a mixt. of sulfite, m. 24°-2. degree., [alpha].D<sub>25</sub>+14.0 degree., and III. When IV (CA 63: 14917a) was correlated with picrotoxinin. Thus, I, 4.0 ml. with 0.1 ml. concd. HCl 4 min. at 35-degree, gave 0.7 g. VI (loc. cit.), which with 0.1N NaOH, 1 hr. at room temp., then AcOH added, and the mixt. kept 18 hrs., gave VII, m. 160°-0.5 degree., [alpha].D<sub>25</sub>+17.1 degree., which with 0.1 ml. 4% HCl, 1 hr. at room temp., gave a mixt. of VII and VIII with CHCl<sub>3</sub>-dry ice. The KBr spectrum of the mixt. was identical with that of the mixt. of VII and VIII, and the mixt. of the latter with 0.1 ml. 4% HCl, 1 hr. at room temp., gave a mixt. of VII and VIII with CHCl<sub>3</sub>-dry ice. The KBr spectrum of the mixt. was identical with that of the mixt. of VII and VIII with 0.1 ml. 4% HCl, 1 hr. at room temp., and the mixt. of VII and VIII with 0.1 ml. 4% HCl, 1 hr. at room temp., then AcOH added, and the mixt. kept 18 hrs., gave VIII, m. 149°-0.5 degree., [alpha].D<sub>25</sub>+14.0 degree., and picrotoxinin (CA 63: 14917a) titrated with 0.1 ml. AcOH at room temp. and under N gave XII, m. 164°-0.5 degree., [alpha].D<sub>25</sub>+17.1 degree., which with the Jones reagent in MeOH, 1 hr. at room temp., was treated in 1 ml. XII, m. 160°-2. degree., [alpha].D<sub>25</sub>+17.1 degree. The isolated salt, cf. "1" q. XII in 1.35 ml. CH<sub>2</sub>NH, a mixt. of 0.06 ml. AcOH, 0.04 ml. AcO, and 1.18 ml. of a soln. of tert-butyl methacrylate in 1.0 ml. chloroform, then 0.01 ml. of a mixt. kept 32 hrs. at 110-degree, the excess of which was treated with iso-PrOH, the soln. dil'd. and centd. with AcOH, [alpha].D<sub>25</sub>+17.1 degree, identical with the compd. obtained from V.

IT 19600-00-1P

KB: SPN (Synthetic preparation); PREP Preparation  
(prep'n, of)

L6 ANSWER 25 OF 26 EGARLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1965:24348 HCAPLUS

DOCUMENT NUMBER: 62-74348

ORIGINAL REFERENCE NO.: D-9413177/d-c

**TITLE:** *How to Write a Book* by *John Smith*

ANSWERED; DRAFTED.

Blatter, A., 1981,

CORPORATE SOURCE: [www.britishairways.com](http://www.britishairways.com)

SOURCE: J. Chm

DOCUMENT TYPE: Journal

LANGUAGE: English

G1 For diagram(s), see printed CA Issue.  
 AB The prepn. and properties of some phospholes (phosphacyclopentadienes) are described. The product of the reaction of 1,2,5-triphenylphosphole with CH<sub>2</sub>N<sub>2</sub> is shown to be a cyclopropane deriv. (I), but the reaction of the phosphole with Me diazoacetate yields a compd. for which the five-membered structure (II) cannot be rigorously excluded. N.M.R. spectra were important in detg. these structures, and size- interesting trans-phosphole couplings with P have been encountered.

IT 1256-02-6, 3-Phosphabicyclo[3.2.0]hept-1(5)-ene-6,7-di-carboxylic  
anhydride, 2,3,4-triphenyl-, 3-oxide  
(prepn. of)

ANSWER 26 OF 26 - HCABLUS - COPYRIGHT 2003 ACS

ADDRESS NUMBER: 1864-14847 - NCAR/NS

DOCUMENT NUMBER: 62-1431

ORIGINAL EDITION NO. 1, 1944

TABLE I.

For more information about the study, please contact Dr. Michael J. Hwang at (319) 356-4550 or via email at [mhwang@uiowa.edu](mailto:mhwang@uiowa.edu).

AUTHOR(S): Bier, Erich; Stanacev

CORPORATE SOURCE: Univ. Toronto, Can.

SOURCE: J. Am. Chem. Soc. (1965), 87(3)

CODEN: JACSAT; ISSN

DOCUMENT TYPE: Journal

LANGUAGE: English

AB cf. CA 62, 279<sup>1b</sup>. The phosp

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L7 ANSWER 1 OF 1 CAOLD COPYRIGHT 2003 ACS  
 AN CA62:1317c CAOLD  
 TI phosphonolipids - (III) synthesis of a phosphonic acid, analog of  
 L-alpha,(distearoyl)lecithin  
 AU Baer, Erich; Stanacev, N. Z.  
 IT 999-92-6 1010-15-5 1031-12-5 1031-13-6 1031-14-7 1054-36-6  
 1045-11-0 1048-10-6 1155-95-9 1162-64-7 1162-70-6 1163-16-8  
 1163-97-9 1169-14-0 1181-62-0 1223-77-4 1249-30-5 1249-32-7  
**1256-02-6** 1475-60-5 1475-81-6 1609-67-2 1609-68-3  
 1609-70-7 1641-52-9 1641-63-0 1641-64-1 1794-96-3 1990-89-2  
 2141-46-2 2302-72-7 2857-89-8 2857-90-1 2857-91-2 2857-92-3  
 3272-83-1 6886-94-6 7562-34-7 73294-90-3 95164-72-0 95263-18-6  
 105862-63-3

$\Rightarrow$

&gt;&gt;

=> fil reg  
FILE 'REGISTRY' ENTERED AT 16:52:34 ON 06 FEB 2004.  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2003 American Chemical Society (ACS)

Property values ended with LC are from the ZINC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 11 FEB 2004 01:00:00 PM (EST) +14  
DICTIONARY FILE UPDATES: 11 FEB 2004 01:00:00 PM (EST) +14

TSCA INFORMATION NOW CURRENT. TIN/TCM MAY NOT BE ACCURATE.

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

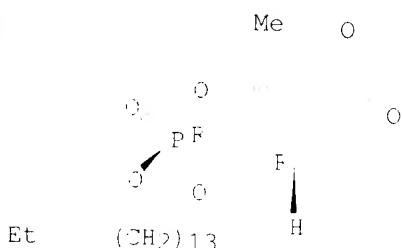
Experimental and calculated property data are now available. See [PROPERTIES](#) for more information. See STRATEGY, Determinants, in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes21.pdf>

=>  
=>

=> d ide can 15 tot

L5 ANSWER 1 OF 32 REGISTRY COPYRIGHT 2003 ACS  
EN 447408-07-3 REGISTRY  
CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 2,3,4-trihydro-5-methyl-3-[[(4-methylhexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (ACI) (CA INDEX NAME)  
OTHER NAMES:  
CN Cyclipostin Q3  
FS STEREOSEARCH  
MF C14 H43 O6 P  
SE CA  
LC STN Files: CA, CAPLUS

Relative stereochemistry.  
Currently available stereo shown.



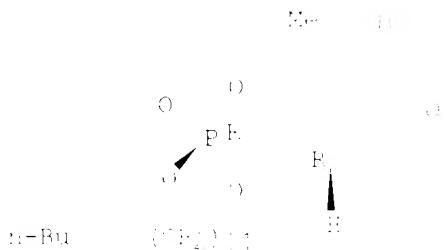
Me

1 REFERENCES IN FILE CA (1962 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

LS ANSWER 2 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372092-51-8 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-[13-oxohexadecyl]oxy-, 3-oxide, (3F,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin H  
 FS STEREOSEA5CH  
 MF C23 H39 O<sup>+</sup> P  
 SR CA  
 LC STN Files: CA, CAFLUS

Relative stereochemistry.  
 Currently available stereo shown.



C

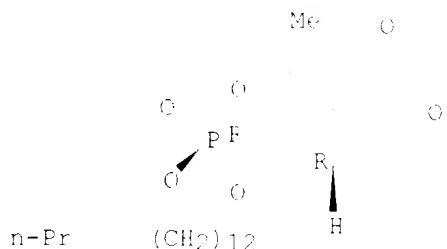
2 REFERENCES IN FILE CA (1962 TO DATE)  
 2 REFERENCES IN FILE CAFLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 135:356841

LS ANSWER 3 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372092-46-1 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-[13-oxohexadecyl]oxy-, 3-oxide, (3F,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin G  
 FS STEREOSEA5CH  
 MF C23 H39 O<sup>+</sup> P  
 SR CA  
 LC STN Files: CA, CAFLUS

Relative stereochemistry.  
 Currently available stereo shown.



C

2 REFERENCES IN FILE: 137:165939  
 2 REFERENCES IN FILE: 135:356841

REFERENCE 1: 137:165939

REFERENCE 2: 135:356841

LS ANSWER 4 OF 32 REGISTRY COPYRIGHT 2003 AUS  
 RN 372092-44-8 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 5,8a-dihydro-1-[1H-hydroxyhexadecyl]oxy]-5-methyl-, 3-oxide, (3R,5aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin E

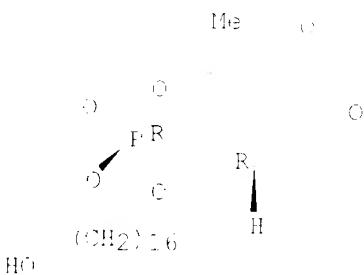
FS STEREOSEARCH

MF C23 H41 O7 P

SF CA

IC STN Files: CA, CASIUS

Relative stereochemistry.  
 Currently available stereo shown.



2 REFERENCES IN FILE: 137:165939  
 2 REFERENCES IN FILE: 135:356841

REFERENCE 1: 137:165939

REFERENCE 2: 135:356841

LS ANSWER 5 OF 32 REGISTRY COPYRIGHT 2003 AUS  
 RN 372092-45-8 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 5,8a-dihydro-1-[1H-hydroxyhexadecyl]oxy]-5-methyl-, 3-oxide, (3R,5aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin D

FS STEREOSEARCH

MF C23 H41 O7 P

SF CA

IC STN Files: CA, CASIUS

Relative stereochemistry.  
 Currently available stereo shown.



OH

3 REFERENCES IN FILE CA (1962 TO DATE)  
 2 REFERENCES IN FILE CAPIUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 137:165941

I5 ANSWER 6 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 372092-41-6 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-3-[1H-hydroxyhexadecyl]oxy]-6-methyl-, 3-oxide, (+)-, (2R,8aR)- (CA UNIMONNAME)

OTHER NAMES:

CN Cyclipostin C

FS STEREOSEARCH

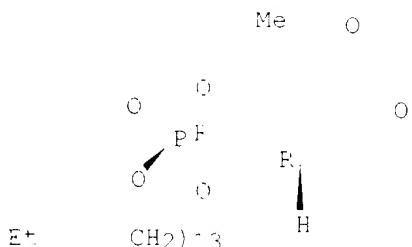
NF C23 H41 O7 P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



OH

3 REFERENCES IN FILE CA (1962 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:390111

REFERENCE 3: 135:356841

I5 ANSWER 7 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 372092-36-9 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-3-[1H-

hydroxyhexadecyl[oxy]-(1-propyl-, 3-oxido, 8aR,9aR)-5-[14-methylpentadecyl] (CA INDEX NAME)

## OTHER NAMES:

CN Cyclipostin B

FS STEREOSEARCH

MF C25 H41 O7 P

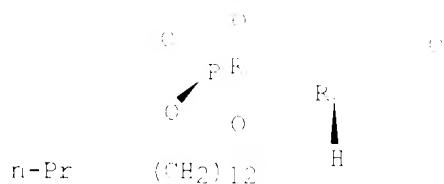
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.

CH



CH

3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:390111

REFERENCE 3: 135:157641

LS ANSWER 3 OF 32 REGISTRY COPYRIGHT 2003 ACD

RN 372092-05-2 REGISTRY

CN 1H,6H-Euro[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-[14-methylpentadecyl]oxy]-5-propyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

## OTHER NAMES:

CN Cyclipostin T2

FS STEREOSEARCH

MF C25 H45 O6 P

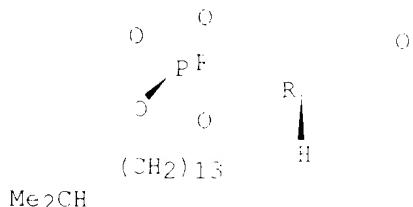
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.

Pr-n O



3 REFERENCES IN FILE CA (1962 TO DATE)

## 3 REFERENCES IN FILE CA (1962 TO DATE)

REFERENCE 1: 137:165939

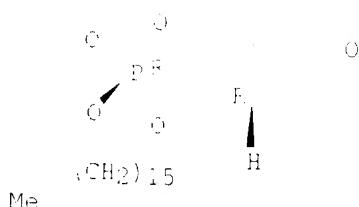
REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

LS ANSWER 3 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372092-04-1 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 5-ethoxy-, 3-hexadecyloxy-, 8a,8a-dihydro-5-propyl-, 5-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin T  
 FS STEREOSEARCH  
 MF C25 H43 O6 P  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.

Pr-n O



## 3 REFERENCES IN FILE CA (1962 TO DATE)

## 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

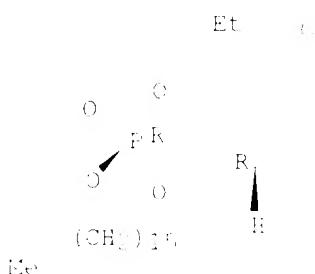
REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

LS ANSWER 10 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372092-03-0 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 5-ethyl-3-(hexadecyloxy)-8,8a-dihydro-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin S  
 FS STEREOSEARCH  
 MF C21 H43 O6 P  
 SR CA  
 LC STN Files: BIOSIS, CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:340111

REFERENCE 3: 135:356841

!5 ANSWER 11 OF 32 REGISTRY COPYRIGHT 2003 AHS

RN 372091-98-0 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-5-methyl-3-[13-methyltetradecyloxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

+OTHER NAMES:

CN Cyclipostin R

FS STEREOSEARCH

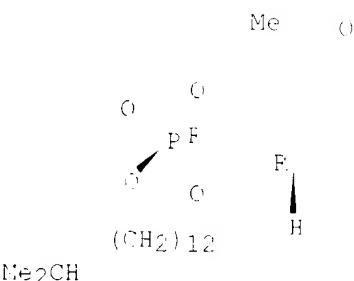
MF C22 H39 O6 P

JR CA

LG STN Files: CA, CAPLUS, USPATENT

Relative stereochemistry.

Currently available stereo sh. m.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:340111

REFERENCE 3: 135:356841

!5 ANSWER 12 OF 32 REGISTRY COPYRIGHT 2003 AHS

RN 372091-96-8 REGISTRY

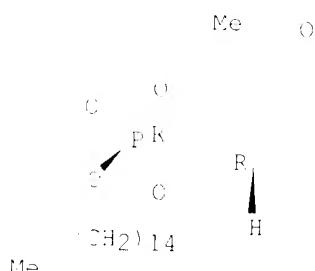
CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-5-methyl-3-(pentadecyloxy)-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

+OTHER NAMES:

CN Cyclipostin R

FS CTEREOSEARCH  
 MF C22 H59 O6 P  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356341

LS ANSWER 13 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 372091-95-7 REGISTRY

CH 18,0-H-Puro[3,4-e][1,3,2]dioxaphosphhepin-6-one, 3-(heptadecyl oxy)-5,8a-dihydro-5-methyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin Q

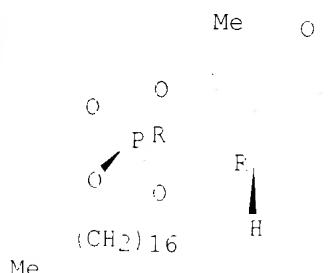
FS STEREOSEARCH

MF C24 H43 O6 P

SP CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356341

L5 ANSWER 14 OF 32 REGISTRY COPYRIGHT 2003 ACS

PN 372091-94-6 REGISTRY

CN 1H, 6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 3-, 8a-dihydro-5-methyl-, [14-methylpentadecyl]oxy-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin P2

FS STEREOSearch

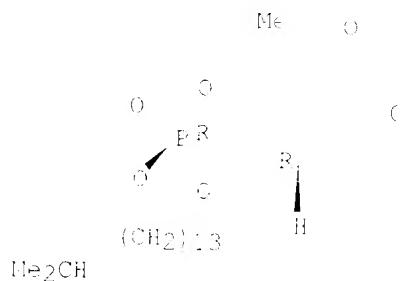
MF C<sub>23</sub> H<sub>41</sub> O<sub>6</sub> P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 133:356841

L5 ANSWER 15 OF 32 REGISTRY COPYRIGHT 2003 ACS

PN 372091-46-8 REGISTRY

CN 1H, 6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 3-(hexadecyloxy)-8,8a-dihydro-5-methyl-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin P

FS STEREOSearch

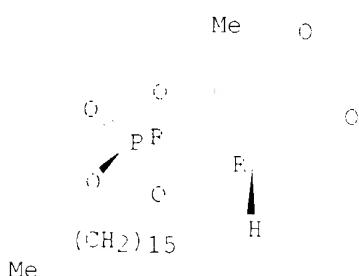
MF C<sub>23</sub> H<sub>41</sub> O<sub>6</sub> P

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.

Currently available stereo shown.



3 REFERENCES IN FILE CA (1962 TO DATE)

## 3 REFERENCES IN FILE CA (1962 TO DATE)

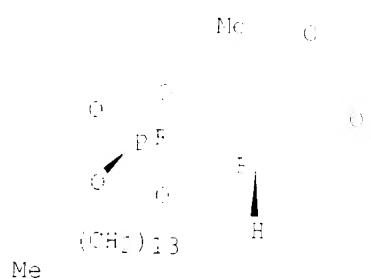
REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 1C OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372090-93-2 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-5-methyl-3-[(tetradecyloxy)-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin N  
 FS STEREOSEARCH  
 MF C21 H37 O6 P  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



## 3 REFERENCES IN FILE CA (1962 TO DATE)

## 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

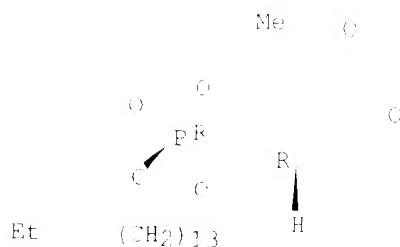
REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 17 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 372090-27-2 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-5-methyl-3-[(14-oxhexadecyl)oxy]-, 3-oxide, (3R,8aR)-rel- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Cyclipostin F  
 FS STEREOSEARCH  
 MF C23 H39 O7 P  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



O

3 REFERENCES IN FILE CA (1962 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 18 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 312038-34-1 REGISTRY

CN 1*H*,6*H*-Furo[3,4-*e*][1,3,2]dioxaphosphepin-6-one, 8,8a-dihydro-3-[1*H*-hydroxy-1*H*-methylpentadecyl]oxy]-5-methyl-, 3-oxide, (3*R*,8a*R*)-rel- (901) (CA INDEX NAME)

OTHER NAMES:

CN Cyclipostin A2

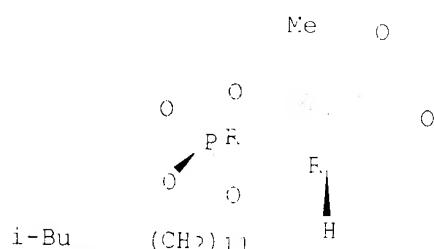
FS STEFEOSEARCH

MF C<sub>23</sub> H<sub>41</sub> O<sub>7</sub> P

SP CA

LC STM Files: CA, CAPLUS, USPATFULL

Relative stereochemistry.  
 Currently available stereo shown.



OH

3 REFERENCES IN FILE CA (1962 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:356841

L5 ANSWER 19 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 372083-50-6 REGISTRY

CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphorin-6-one, 5,5-dihydro-3-[12-hydroxyhexadecyl]-oxy]-1-methyl-, 5-oxide, 1H,5H-dihydro-1-(6H)- (9CI) (CA INDEX NAME)

## OTHER NAMES:

CN Cytelostatin A

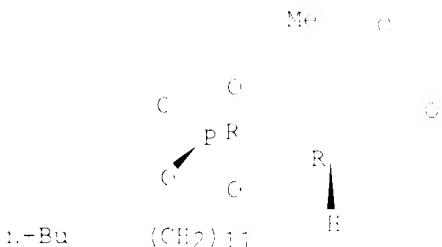
FS CASREACT

MF C<sub>23</sub>H<sub>41</sub>O<sub>5</sub>P

SR CA

LC STN Files: CA, CASPLUS, CASREACT

Relative stereochemistry.



CH:

3 REFERENCES IN FILE CA (1962 TO DATE)

3 REFERENCES IN FILE CASPLUS (1962 TO DATE)

REFERENCE 1: 137:165939

REFERENCE 2: 136:380111

REFERENCE 3: 135:396841

L5 ANSWER 20 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 224576-83-4 REGISTRY

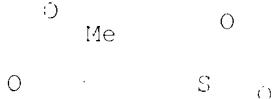
CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-3a-methyl-, 5,5-dioxide (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C<sub>9</sub>H<sub>10</sub>O<sub>5</sub>S

SR CA

LC STN Files: CA, CASPLUS, CASREACT



C:

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

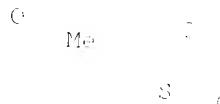
1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CASPLUS (1962 TO DATE)

REFERENCE 1: 130:337674

L5 ANSWER 21 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 224576-91-2 REGISTRY  
 CN Thieno[3',4':3,4]cyclobutan[1,2-e]furan-1,3-dione, hexahydro-3-methyl-,  
 5,5-dioxide (9CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C9 H10 O4 S  
 SR NA  
 LC STN Files: CA, CAPLUS, CASREACT



Q:

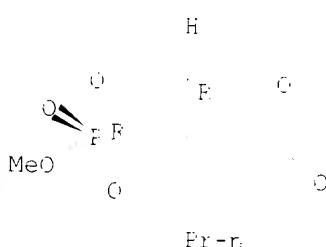
\*\*PROPERTY DATA AVAILABLE IN THE 'PRIM' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 110:337674

LS ANSWER 22 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 186312-14-8 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-3-methoxy-5-  
 propyl-, 3-oxide, (3R,8aR)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-3-methoxy-5-  
 propyl-, 3-oxide, (3E-cis)-  
 OTHER NAMES:  
 CN NK 9C100CA  
 FS STEREOSEARCH  
 MF C10 H15 O4 P  
 SF CA  
 LC STN Files: CA, CAPLUS

Absolute stereochemistry.



Pr-r:

1 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 121:81134

LS ANSWER 23 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 144773-26-2 REGISTRY  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-3-methoxy-5-  
 methyl-, 3-oxide, (3R,8aE)- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 1H,6H-Furo[3,4-e][1,3,2]dioxaphosphhepin-6-one, 8,8a-dihydro-3-methoxy-5-

methyl-, 3-oxide, (3R+3S)-

## OTHER NAMES:

CN Cyclophosphine

CN Cyclophosphine, triphenyl-

CN NK 901098

FS STEREOSEARCH

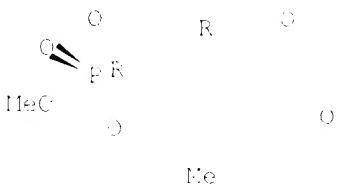
MF C<sub>21</sub>H<sub>18</sub>O<sub>3</sub>P

SR CA

LC STN Files: BEILSTEIN\*, CA, CASREACT, MEDLINE

Absolute stereochemistry.

B



\* REFERENCES IN FILE CA 1962 TO DATE

† REFERENCES IN FILE CASREACT TO DATE

REFERENCE 1: 115:27922

REFERENCE 2: 120:27992

REFERENCE 3: 118:2472

L5 ANSWER 24 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 137411-69-9 REGISTRY

CN 4,7-Phosphinidenebenzo[3,4]cyclobuta[1,2-c]furan-1,3-dione, 3a,3b,4,7,7a,7b-hexahydro-4,7,8-triphenyl-, 3-oxide, stereoisomer(s) (CA INDEX NAME)

MF C<sub>26</sub>H<sub>21</sub>O<sub>4</sub>P

SR CA

LC STN Files: BEILSTEIN\*, CA, CACPLUS, CASREACT  
(\*File contains numerically searchable property data)



C

Ph P



Ph

1 REFERENCES IN FILE CA 1962 TO DATE

1 REFERENCES IN FILE CASREACT TO DATE

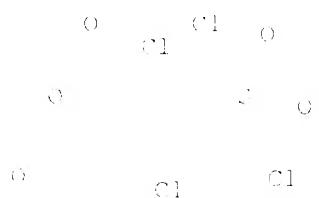
REFERENCE 1: 115:279722

L5 ANSWER 25 OF 32 REGISTRY COPYRIGHT 2003 ACS

FN 84451-46-7 REGISTRY

CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, 3b,4,6,6a-tetrachlorhexahydro-, 5,5-dioxide (9CI) (CA INDEX NAME)

FS 30 CONCORD  
 MF C8 H4 O5 S  
 LC STN Files: CA, CAPLUS



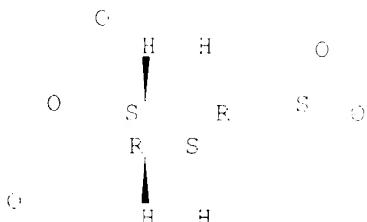
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1962 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 98:71164

LS ANSWER 26 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 8235-14-6 REGISTRY  
 CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-3a,6a-dimethyl-, 1,5-dioxide, (3a.alpha.,3b.beta.,6a.beta.,6b.alpha.)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 MF C8 H8 O5 S  
 LC STN Files: CA, CAPLUS, CASREACT

Relative stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

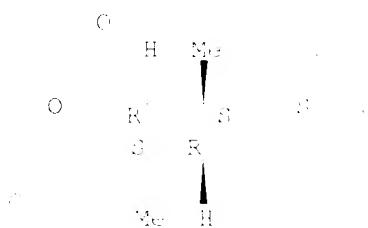
2 REFERENCES IN FILE CA (1962 TO DATE)  
 2 REFERENCES IN FILE CAPLUS 1962 TO DATE)

REFERENCE 1: 104:69022

REFERENCE 2: 97:71910

LS ANSWER 27 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 79926-12-8 REGISTRY  
 CN Thieno[3',4':3,4]cyclobuta[1,2-c]furan-1,3-dione, hexahydro-3a,6a-dimethyl-, 1,5-dioxide, (3a.alpha.,3b.beta.,6a.beta.,6b.alpha.)- (9CI) (CA INDEX NAME)  
 FS STEREOSEARCH  
 DE 99685-39-9  
 MF C10 H12 O5 S  
 LC STN Files: CA, CAPLUS, CASREACT

Relative stereochemistry.



\*\* PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT \*\*

1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 94:15666/

LS ANSWER 26 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 77196-23-7 REGISTRY  
 CN Thiено[3',4':3,4]цикличета[1,2-с]фуран-1(3H)-он, hexahydro-, 1,3-диксид (9CI) (CA INDEX NAME)  
 PS 3D CONCORD  
 MF C8 H10 O4 S  
 LC STN Files: CA, CAPLUS, CASREACT



\*\* PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT \*\*

1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 94:156660

LS ANSWER 29 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 RN 33974-24-2 REGISTRY  
 CN Thiено[3',4':3,4]цикличета[1,2-с]фуран-1,3-діон, hexahydro-, 3,5-діоксид (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride, 3,5-dioxide (8CI)  
 PS 3D CONCORD  
 MF C8 H8 O5 S  
 LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, IFICDB, IFIPAT, IFIUDB, USPATFULL



G

\*\*PROPERTY DATA AVAILABLE IN THE 'PROF' FORMAT\*\*

12 REFERENCES IN FILE CA (1962 TO DATE)  
 12 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 180:37774

REFERENCE 2: 105:24136

REFERENCE 3: 111:17342

REFERENCE 4: 93:31304

REFERENCE 5: 91:41163

REFERENCE 6: 94:115466

REFERENCE 7: 86:17441

REFERENCE 8: 78:1748

REFERENCE 9: 83:92277

REFERENCE 10: 78:71698

L5 ANSWER 30 OF 32 REGISTRY COPYRIGHT 2003 ACS

RN 35974-22-0 REGISTRY

CN Thieno[3',4':3,4]cyclobut[1,2-e]furan-4,6-dione, 3b,6a-dichlorophenylidene-, 2,2-dioxide (SCII) (CA INDEX NAME)

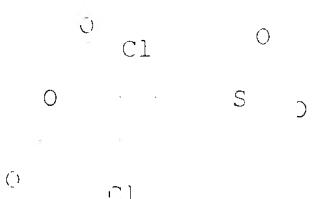
OTHEF CA INDEX NAMES:

CN 3-Thiabicyclo[3.2.0]heptane-6,7-dicarboxylic anhydride, 6,7-dichloro-, 3,3-dioxide (SCII)

FS 3D CONCORD

MF C8 H6 Cl2 O5 S

LC STN Files: CA, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'PROF' FORMAT\*\*

4 REFERENCES IN FILE CA (1962 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 98:42793

REFERENCE 2: 80:188142

REFERENCE 3: 76:153463

REFERENCE 4: 75:140590

L5 ANSWER 31 OF 32 REGISTRY COPYRIGHT 2003 ACS

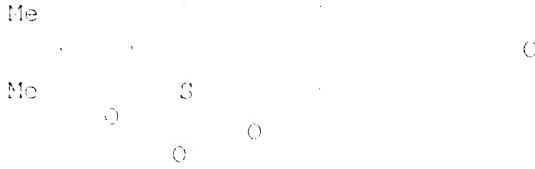
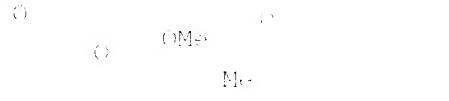
RN 19600-00-1 REGISTRY  
 CN Spire[2,5-methano-7H-oxireno[3,4]cyclopent[1,2-d]oxepin-7,2'-oxiran]-3(2H)-one, 1a,beta.,1b,5.alpha.,6,6a,7a,beta.-hexahydro-1b,alpha,-hydroxy-3a,5a,6a-triethyl-, 3y,3z-diol, (-) - (7CI, 8CI) (CA INDEX NAME)

OTHER CA INDEX NAME:

CN Spire[2,5-methano-7H-oxireno[3,4]cyclopent[1,2-d]oxepin-7,2'-oxiran]-3(2H)-one, 1a,beta.,1b,5.alpha.,6,6a,7a,beta.-hexahydro-1b,alpha,-hydroxy-3a,5a,6a-triethyl-, 3y,3z-diol, (-) - (7CI, 8CI) (CA INDEX NAME)

MF C16 H20 O8 S

LC STN Files: CA, CACLD, CAPLUS



\*\*PROPERTY DATA AVAILABLE IN THE 'FILE' FORMAT\*\*

1 REFERENCES IN FILE CA (1962 TO DATE)

1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 68:3008

15 ANSWER 32 OF 32 REGISTRY COPYRIGHT 2003 ACS  
 FN 1156-02-6 REGISTRY  
 CN 3-Phosphabicyclo[3.2.0]hept-1(5)-ene-6,7-dicarboxylic anhydride, 2,3,4-triphenyl-, 3-oxide (7CI, 8CI) (CA INDEX NAME)  
 FS 3D CONCORD  
 MF C26 H19 O4 P  
 LC STN Files: CA, CACLD, CAPLUS



2 REFERENCES IN FILE CA (1962 TO DATE)

2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

1 REFERENCES IN FILE CACLD (PRIOR TO 1967)

REFERENCE 1: 62:74348

REFERENCE 2: 62:74347